

CLAIM OR CLAIMS

1. An apparatus for treating a workpiece by printing and laser treatment, the apparatus comprising:

- (a) a pallet for supporting at least a portion of the workpiece;
- (b) a laser selectively projecting a laser beam along a projection path to intersect the pallet; and
- (c) a printing head for printing the workpiece disposed on the pallet, the pallet being moveable relative to at least one of the laser and the printing head.

2. The apparatus of Claim 1, further comprising a controller connected to the laser.

3. The apparatus of Claim 1, wherein the printing head is moveable between a screening position and a retracted position.

4. The apparatus of Claim 1, wherein the pallet includes a registration of the workpiece relative to the pallet for both the laser and the printing head.

5. The apparatus of Claim 1, wherein the pallet is moveable.

6. The apparatus of Claim 1, wherein the laser is fixed.

7. The apparatus of Claim 1, wherein the laser is moveable.

8. The apparatus of Claim 1, wherein the printing head includes a screen for passing the ink.

9. The apparatus of Claim 1, wherein the laser includes a scanning laser.

10. A screen printing and laser treating apparatus for printing and laser treating a workpiece, the apparatus, comprising:

- (a) a pallet for supporting at least a portion of the workpiece;
- (b) a screen for passing ink to print on the workpiece, the pallet being moveable relative to the screen moveable between a screening position and a spaced position; and
- (c) a laser projecting a laser beam along a projection path to intersect the pallet.

11. The screen printing and laser treating apparatus of Claim 10, wherein the laser beam intersects the pallet in the spaced position.

12. The screen printing and laser treating apparatus of Claim 10, further comprising a plurality of screens.

13. The screen printing and laser treating apparatus of Claim 10, wherein the laser includes a focusing optic in the projection path for changing a focal point of the laser beam along the projection path.

14. The screen printing and laser treating apparatus of Claim 10, wherein the laser includes a beam expander in the projection path.

15. The screen printing and laser treating apparatus of Claim 10, wherein the laser includes a polygon scanner.

16. The screen printing and laser treating apparatus of Claim 10, wherein the laser includes a galvanometer laser scanner.

17. The screen printing and laser treating apparatus of Claim 10, wherein the laser is selected to cut the workpiece.

18. The screen printing and laser treating apparatus of Claim 10, wherein the pallets rotate about a central axis.

19. The screen printing and laser treating apparatus of Claim 10, further comprising a frame and a plurality of printing heads connected to the frame.

20. A method of marking a workpiece, the method comprising:
 (a) registering the workpiece relative to a pallet;
 (b) treating the workpiece with a laser;
 (c) marking the workpiece with ink; and
 (d) removing the laser treated and ink marked workpiece from the pallet.

21. The method of Claim 20, wherein treating the workpiece with a laser includes at least one of fading, photo-decomposing, cutting, ablating, perforating or marking.

22. The method of Claim 20, wherein marking the workpiece with ink includes passing the ink through a screen to mark the workpiece.

23. The method of Claim 20, further comprising moving the pallet relative to a laser marker.

24. The method of Claim 20, further comprising marking the workpiece with a plurality of inks.

25. A processed fabric, comprising:

(a) a fabric formed of natural fibers;

(b) a plurality of laser formed perforations in the fabric, each perforation having a periphery; and

(c) a binding coating on the fabric adjacent the periphery, the binding coating reducing a fray or unwinding of the fibers along the periphery.

26. The fabric of Claim 25, wherein the binding coating is an oil base.

27. The fabric of Claim 25, wherein the binding coating is a plastisol ink.

28. The fabric of Claim 25, wherein the perforations have a diameter less than 500 microns.

29. The fabric of Claim 25, wherein the perforations have a diameter less than 10 microns.

30. The fabric of Claim 25, wherein the perforations have a diameter less than 1 millimeter.

31. An apparatus for marking a workpiece, comprising:

a plurality of printing heads;

a plurality of pallets moveable relative to the pallets, each pallet moveable between a printing position and a non-printing position; and

a laser projecting a laser beam along a projection path to intersect the pallet, upon the pallet being in the non-printing position.

32. The apparatus of Claim 31, wherein each printing head includes a screen and a wiper for selectively urging ink through a screen.

33. The apparatus of Claim 31, wherein the laser scanner is a galvanometer laser scanner.

34. The apparatus of Claim 31, wherein the laser scanner is a polygon scanner.

35. A method of treating a fabric, comprising:

- (a) laser forming a plurality of perforations in the fabric; and
- (b) applying an oil based ink to the fabric.

36. The method of Claim 35, wherein the laser forming occurs before applying the oil based ink.

37. The method of Claim 35, wherein the laser forming occurs after applying the oil based ink.

38. The method of Claim 35, further comprising precluding fraying of fibers with the ink adjacent the perforations.